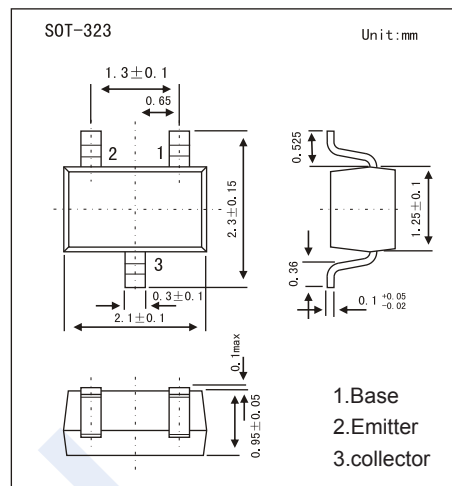


NPN Transistors

BC817W (KC817W)

■ Features

- For General AF Applications
- High Collector Current
- High Current Gain
- Low Collector-Emitter Saturation Voltage
- Complementary to BC807W

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	50	V
Collector - Emitter Voltage	V_{CE0}	45	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	0.5	A
Collector Power Dissipation	P_C	0.2	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100\ \mu\text{A}, I_E = 0$	50			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 10\ \text{mA}, I_B = 0$	45			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100\ \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 50\ \text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 5\ \text{V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\ \text{mA}, I_B = 50\ \text{mA}$			0.7	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500\ \text{mA}, I_B = 50\ \text{mA}$			1.2	
Base-emitter voltage	$V_{BE(on)}$	$V_{CE} = 1\ \text{V}, I_C = 500\ \text{mA}$			1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = 1\ \text{V}, I_C = 100\ \text{mA}$	100		600	
	$h_{FE(2)}$	$V_{CE} = 1\ \text{V}, I_C = 500\ \text{mA}$	40			
Collector output capacitance	C_{ob}	$V_{CB} = 10\ \text{V}, f = 1\ \text{MHz}$			5	pF
Transition frequency	f_T	$V_{CE} = 5\ \text{V}, I_C = 10\ \text{mA}, f = 100\ \text{MHz}$	100			MHz

■ Classification of $h_{FE(1)}$

Type	BC817W-16	BC817W-25	BC817W-40
Range	100-250	160-400	250-600
Marking	6A	6B	6C

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■ Typical Characteristics

